

REMARKS

Claim Rejections – 35 USC §103

The examiner rejected claims 1-3 under 35 USC §103(a) as unpatentable over U.S. Patent No. 5,631,787 to Huang et al. The examiner asserts that Huang discloses a disk drive with a cover comprising a shroud 120, 122 in FIGs. 1-2 extending axially from the inner surface of the base into the head disk assembly chamber substantially enveloping the outer periphery of the disk, including at least part of the outer periphery coextensive with the actuator arm when the actuator arm is positioned adjacent the outer periphery of the disk, to provide radial shrouding of the disk. The examiner asserts that Huang discloses that the shroud could be a separate piece adhered to the inner surface of the base or made an integral part of the base (col. 6, lines 50-67; col 7., lines 1-12). However, the examiner concedes that Huang does not disclose that the shroud is part of the cover. The examiner asserts that it would have been obvious at the time the invention was made to modify the disk drive of Huang with a shroud located on the cover, since it involves merely rearranging parts of an invention. The applicant respectfully disagrees.

At col. 6, line 65 to line 7, line 3, Huang suggests that “the shroud elements 120 and 122 could be fashioned during casting of the base and sidewalls as extensions of the sidewalls. Thus, the shroud elements would be formed of cast aluminum as an integral portion of the disk drive base.” However, this embodiment would render it extremely difficult to manufacture the disk drive since the actuator arms 112 and disks 6 would have to be installed into the disk drive as a unitary assembly. Referring to applicant’s disclosure at page 2, lines 19-22, the preferred method for manufacturing a disk drive is to first install the disk 108 (FIG. 1), and then install the actuator arm assembly so that the actuator arms 110 fit into the gap 118 without damaging the heads 114. The actuator arms 110 are then rotated to position the heads 114 over the disks 108. If the shroud 122 disclosed in FIG. 1 of Huang was integrally formed with the base 104, it would prevent installing the actuator arms 112 as a separate assembly since the shroud 122 would

obstruct the actuator arms 112 from rotating into position over the disks 106 (FIG. 1 of Huang). This is why Huang discloses the shroud 122 as a separate element which is installed after rotating the actuator arms 112 into position over the disks 106. However, installing the shroud 122 as a separate element increase the cost and complexity of manufacturing the disk drive.

The applicant's disclosure overcomes the drawbacks associated with installing a separate shroud element while still allowing the actuator arms to be installed as a separate assembly. Referring for example to the disk drive disclosed in FIG. 2 of applicant's disclosure, the radial shrouding provided by the base 128 does not extend into the gap 138 so that when installing the actuator arm assembly the actuator arms 126 are inserted into gap 138 and then rotated to position the heads 124 over the disks 122. The cover 130 (and its shroud element 136 of FIG. 3A) is then fastened to the disk drive 120 during a single manufacturing step, wherein the shroud 136 fits into gap 138 of FIG. 2 to provide additional radial shrouding. This avoids the cost and complexity of installing a separate shroud element as disclosed by Huang. Further, this allows the actuator arms 126 to be installed as a separate assembly after installing the disks 122 since the shroud 136 is not formed as an integral part of the base 128 as suggested by Huang, and therefore the shroud 136 does not obstruct the rotation of the actuator arms 126 after being inserted into gap 138 (FIG. 2).

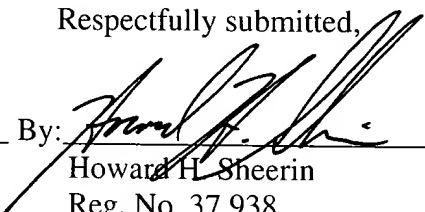
Applicant's invention extends the desirable effects of radial shrouding while achieving significant benefits to the manufacturing process overcoming the drawbacks associated with Huang's disclosure. Huang does not disclose any motivation for combining the shroud with the cover, and the motivation of reducing manufacturing time as suggested by the examiner comes only from applicant's own disclosure which cannot be used under 35 USC §103. The examiner is employing improper hindsight relying on a motivation taught by applicant's disclosure rather than a motivation taught by the prior art. The rejection should therefore be withdrawn.

The rejection of the remaining claims should be withdrawn for the reasons set forth above.

CONCLUSION

The above amendments to the specification do not add new matter or raise new issues; the applicant respectfully requests the amendments be entered. In view of the foregoing remarks, the rejections under 35 USC §103 should be withdrawn. Huang's teaching to integrate the shroud 122 with the base 104 of a disk drive would significantly increase the cost and complexity of manufacturing the disk drive since the actuator arms 112 and disks 106 would have to be installed as a unitary assembly. Further, Huang's teaching to install the shroud 122 as a separate element also increases the complexity and cost of manufacturing a disk drive. Combining the shroud with the cover overcomes these drawbacks, but this modification is suggested only by applicant's own disclosure which cannot be used under 35 USC §103. The examiner is employing improper hindsight relying on a motivation taught by applicant's disclosure rather than a motivation taught by the prior art. The examiner is encouraged to contact the undersigned over the telephone in order to resolve any remaining issues that may prevent the immediate allowance of the present application.

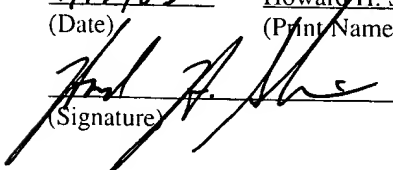
Respectfully submitted,

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CERTIFICATE OF MAILING

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